UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF VERMONT

UNITED STATES OF AMERICA,	:	
	:	
	:	
v.	:	Docket Nos. 2:05-cr-25;
	:	1:05-cr-133; 1:06-cr-19;
CASSIUS LAMAR SHINE, RICHARD E.	:	2:06-cr-82-1,2; 2:06-cr-
MOSES, JR., KEITH J. BAKER, JOSE	:	149-4; 1:07-cr-3; 2:07-
LAVANDIER, JOSEPH BROWN, RICHARD	:	cr-32; 1:07-cr-77; 2:07-
HATCHER, CRAIG BETHEA, DAVID	:	cr-81-1,2; 2:08-cr-02; 1:
DOUGLAS, JOHNNY L. WILLIAMS, DANNIS	:	08-cr-29; 2:08-cr-31-2
HACKNEY, MORIAH HACKNEY, KENNETH	:	
JACKSON, MALIK CRAWFORD-BEY, and	:	
JAMAAL JOHNSON,	:	
	:	
Defendants.	:	

OPINION and ORDER

Fourteen defendants in pending criminal cases have challenged the District of Vermont's plan for selecting grand and petit jurors as violating the Sixth Amendment and the Jury Selection and Service Act, 28 U.S.C. §§ 1861-69 ("JSSA"). The Defendants have contended that the District's system of jury selection results in the unconstitutional underrepresentation of African Americans and Hispanics in the pools from which potential jurors are drawn. The Court (Sessions, C.J., and Murtha, J.) conducted a consolidated hearing on July 1, 2008, at which the Defendants and the Government presented the testimony of the jury administrator and three experts: Orlando Rodriguez, M.S., Jeffrey Fagan, Ph.D., and George Cobb, Ph.D.

Background

A.   The District of Vermont's Jury Selection Plan

Pursuant to the JSSA, the United States District Court for the District of Vermont adopted a Plan for the Random Selection of Grand and Petit Jurors on August 9, 2000. The Plan was approved by the Second Circuit on August 31, 2000, and became effective on October 1, 2000, with the exception of Section 12, which became effective July 1, 2001, upon the creation of the new master jury wheels.[1]

The Plan provides for three jury divisions within the District of Vermont: Northern (including the counties of Caledonia, Chittenden, Essex, Orleans, Franklin, Grand Isle, Lamoille and Washington); Southeastern (including the counties of Orange, Windham and Windsor) and Southwestern (including the counties of Addison, Bennington and Rutland). *See* Plan ¶ 6 (Defs.' Ex. A-1).

The Plan requires the clerk of court to maintain a separate master jury wheel for each division, each wheel consisting of a minimum of five thousand names. *Id.* ¶ 8. The source of names for the master jury wheels are the voter registration checklists

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[1] Effective July 18, 2006 the District adopted a new Plan. According to the jury administrator, the master jury wheel was most recently filled in 2005 under the 2000 Plan, and will not be refilled until November 2008. Thus, the Defendants have been indicted by grand juries selected under the 2000 Plan. The references in this opinion are to the 2000 Plan.

for the fourteen counties. *Id.* ¶ 7. The cities and towns in
each of the jury divisions are proportionally represented in the
master jury wheels, provided that a minimum of two names are
included from each city, town or gore.[2] *Id.* ¶ 9.

The method of selection of names from the voter registration
checklists is as follows: for each jury division the total number
of registered voters, listed in alphabetical order by town, is
divided by the minimum number of names to be placed in the wheel
to obtain a "quotient" to be used to select the names from the
voter checklists. After determining the quotient, the clerk
randomly selects a starting number to identify the first name to
be selected. The "quotient" then determines the interval between
the subsequent names selected. *Id.* This process may be termed
"systematic random selection" as distinct from completely random
selection. (Gov't Ex. 103 at 8.)

The master wheels are emptied and refilled every four years
between January 1 and July 1 following a presidential election,
and may be refilled sooner if demands upon the wheel have been
excessive or the wheel may become exhausted prior to the next
refill. Plan ¶¶ 8, 10. The master wheel was last refilled on
April 15, 2005, and all Defendants have been indicted by grand
juries selected from the 2005 wheel.

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[2] In Vermont, a gore is an unincorporated part of a county that
is not part of any city or town.

From each master wheel names are drawn randomly for jury service within each division. *Id.* ¶ 11. In a "one-step summoning" process, the clerk mails to every person selected a juror qualification questionnaire, to be returned within ten days. *Id.* ¶ 12. Any citizen is eligible to serve as a grand or petit juror unless he or she (1) is under eighteen years of age; (2) has not resided within the District for one year; (3) is unable to read, write and understand the English language with a degree of proficiency sufficient to satisfactorily complete the juror qualification form; (4) is unable to speak the English language; (5) is incapable, by reason of mental or physical infirmity, to render satisfactory jury service; or (6) has a charge pending against him or her for the commission of, or has been convicted in a state or Federal court of record of, a crime punishable by imprisonment for more than one year and civil rights have not been restored. *Id.* ¶ 13. The Plan exempts members in active service in the armed forces of the United States; active, full-time members of the fire or police departments; and public officers in the executive, legislative or judicial branches of the federal, state or local governments who are actively engaged in the performance of official duties. *Id.* ¶ 14. Upon request, the Court may also excuse members of certain classes or groups on the ground of undue hardship or extreme inconvenience. *Id.* ¶ 15.

The juror qualification questionnaire requires a prospective juror to answer questions concerning qualification for jury service, and also requires a prospective juror to identify his or her race and ethnicity by filling in one or more circles that describe the prospective juror: "Black/African American; Asian; American Indian/Alaska Native; White; Native Hawaiian/Pacific Islander; Other." The prospective juror is also asked to answer "yes" or "no" to the question "Are you Hispanic or Latino?" (Defs.' Ex. H.)

Every four years, after the master wheel is emptied and refilled, the district court submits a report on the jury selection process, pursuant to 28 U.S.C. § 1863(a), the JS-12. The JS-12 provides general information about the master jury wheel; race, ethnicity and gender data from a sampling of returned juror questionnaires; and a statistical comparison of the sample against citizen population data. (Defs.' Ex. B, C, D, E.)

B.   Percentages of African Americans and Hispanics in the Adult Vermont Population

As the Government's expert, Dr. Cobb, pointed out, the three main sources of data on the racial and ethnic composition of Vermont residents all have disadvantages, and none can provide an accurate count. Data from the 2000 Census is eight years old, and fails to take into account rapid growth in the African American and Hispanic population. (Gov't Ex. 103.) The Current

Population Survey 2004 ("CPS 2004") includes the most recent data on voter registration, but the data are based on a random sample, and all percentages are estimates, vulnerable to sampling error. As a result, estimates for small sub-groups of the population are not reliable and are not published. CPS 2004 does not report Vermont's percentages of minority registered voters, for example. American Community Survey 2006 ("ACSA 2006") offers the most recent population data, but is based upon an estimate, and does not report minority percentages for Vermont by age.

As of the 2000 Census, Vermont's total population was 608,827, 97.91% of whom were white. The African American population was 4,492, or 0.74%. The Hispanic or Latino population was 5,504, or 0.90%. (Defs.' Ex. K, Fig. 3.) Vermont's total voting age population was 448,411, 97.21% of whom were white. Total African American Vermonters of voting age in 2000 was 1,980, or 0.43%. (Defs.' Ex. K, Fig. 1.) Total Hispanic or Latino Vermonters of voting age numbered 3,668, or 0.80%. (*Id.*)

According to the ACS 2006, the African American population as a whole in Vermont is estimated at 6,535 as of 2006, an increase of more than 45%. (Defs.' Ex. L, Fig. 3.) The Hispanic or Latino population has grown from 5,504 to 6,644, an increase of more than 20%. (*Id.*) As a percentage of the total state population, African Americans have increased from 0.74% in 2000

to an estimated 1.05% in 2006, and Hispanics or Latinos have

increased from 0.90% in 2000 to an estimated 1.06% in 2006.

(*Id.*) The significant population growth suggests that using the

Census 2000 figures for voting age percentages of minorities is a

conservative estimate. The Government and the Defendants used

the 2000 census figures for voting age population as the basis

for their analyses. *See United States v. Rioux*, 97 F.3d 648, 657

(2d Cir. 1996) (appropriate population for determining

constitutionality of jury selection is eighteen and older subset

of the entire population); *but see United States v. Reyes*, 934 F.

Supp. 553, 565 (S.D.N.Y. 1996) (using population of voting-age

citizens).

**C.   Percentages of African Americans and Hispanics in the
       Relevant Jury Pool for the Relevant Time Period**

The Defendants examined the JS-12 report dated April 20,

2006, reflecting the master jury wheel filled on April 15, 2005,

from which all grand juries that indicted the Defendants were

drawn. The jury administrator reported that 16,471 names were

drawn from the voter registration lists and placed in the current

master wheel. (Defs.' Ex. E.) From the master wheel a sample of

945 names were drawn from the master wheel, to which juror

questionnaires were mailed. The return rate was 750; the

remainder were reported as returned as undeliverable or not yet

returned. (*Id.*) Of the 750 returned questionnaires, none

reported race as "Black or African American," and four reported

ethnicity as "Hispanic or Latino."[3] (*Id.*) Of the returned

forms, 143 did not contain responses to the race and ethnicity

questions.

The Defendants compared the racial and ethnic distribution

of the returned questionnaires on which race and ethnicity were

reported with the racial and ethnic distribution of the voting

age population in 2000 as reported in Census 2000. African

Americans represented 0.43% of Vermont's voting age population,

but 0.00% of the sample of the wheel. Hispanics or Latinos

represented 0.80% of the voting age population and 0.90% of the

sample of the wheel, slightly above their proportion in the 2000

voting age population.

The Defendants also examined the racial and ethnic

composition of grand jury pools for the northern (Burlington) and

southwestern (Rutland) divisions for the period 2001-2007. There

were a total of 1,555 individuals in the Burlington pools and

1,130 individuals in the Rutland pools, working out to an average

pool size of 194.4 in Burlington and 188.3 in Rutland. (Defs.'

Ex. L, Fig. 6b.) During these seven years, two African American

and one Hispanic grand juror were selected in the Burlington

division, and one African American and four Hispanic grand jurors

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[3] Five in the sample reported race as "Other," and one reported
race as "Multi-Racial." (Defs.' Ex. E.)

were selected in the Rutland division.[4] (*Id.*, Fig. 6a, 6b;

Defs.' Ex. O.) These numbers compute to an average of 0.25

African Americans and 0.13 Hispanics in each Burlington pool, and

0.17 African Americans and 0.67 Hispanics in each Rutland pool.

Aggregating the two divisions resulted in an average number of

0.42 for African American grand jurors in the District, and an

average number of 0.80 for Hispanic grand jurors in the District.

Using the statewide Census 2000 percentage figures of 0.43%

for African Americans and 0.80% for Hispanics or Latinos, the

expected average number of African Americans in the jury pools

would have been 0.84 in Burlington and 0.81 in Rutland. The

expected average number of Hispanics or Latinos would have been

1.56 in Burlington and 1.51 in Rutland.

Discussion

A.   The Sixth Amendment Guarantee of a Fair Cross-Section

The Sixth Amendment guarantees a defendant in a criminal

trial the right to a jury chosen from a fair cross-section of the

community. *Taylor v. Louisiana*, 419 U.S. 522, 530 (1975).

Although a defendant is not entitled to a jury that actually

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[4] A substantial number of individuals in each pool were
classified as "not active," either because they were excused or
disqualified from jury service or because the juror
questionnaires were returned as undeliverable. According to the
Government, the combined total of completed questionnaires for
both divisions over the years was 1,738. (Gov't Ex. 103A, 103B.)
Racial or ethnic data was of course not available for the pool
members who did not receive or did not return the questionnaires,
or did not respond to the race and ethnicity questions.

mirrors the community, the jury wheel, pools and venires must not

systematically exclude distinctive groups in the community. *Id.*

at 538. In other words, "the Sixth Amendment assures only the

opportunity for a representative jury, rather than a

representative jury itself." *United States v. Biaggi*, 909 F.2d

662, 678 (2d Cir. 1990).

To establish a prima facie violation of the fair cross-

section requirement, a defendant must show 1) the group alleged

to be excluded is a "distinctive" group in the community; 2) the

representation of this group in venires from which juries are

selected is not fair and reasonable in relation to the number of

such persons in the community; and 3) this underrepresentation is

due to systematic exclusion of the group in the jury selection

process. *Duren v. Missouri*, 439 U.S. 357, 364 (1979). Should a

defendant establish a prima facie violation, the burden shifts to

the Government to demonstrate a significant interest in the

procedure used. *See United States v. Jackman*, 46 F.3d 1240, 1248

(2d Cir. 1995) (citing *Duren*, 439 U.S. at 367-68). The same

three-pronged test applies for proof of a violation of the JSSA.

United States v. Miller, 116 F.3d 641, 659 (2d Cir. 1997).

There is no dispute that African Americans and Hispanics or

Latinos are distinctive groups in the community. *See Rioux*, 97

F.3d at 654 ("Blacks and Hispanics are unquestionably

'distinctive' groups for the purposes of a fair-cross-section

analysis.""). For the second prong of a prima facie case, a defendant must first demonstrate the percentage of the group alleged to be underrepresented, and then show that the representation of this group in jury venires is not fair and reasonable. *See Duren*, 439 U.S. at 364. A gross discrepancy between the percentage of the group in the venires and the percentage of the group in the community will indicate that the group is not fairly represented. *Id.* at 365-66. For the third prong, a defendant must show that the cause of the underrepresentation is systematic--that is, inherent in the jury selection process. *Id.* at 366.

Courts have used several approaches to determine whether there is unreasonable underrepresentation of African Americans and/or Hispanics: absolute disparity, absolute impact, comparative disparity and various types of statistical decision theory. *See, e.g., United States v. Weaver*, 267 F.3d 231, 241-43 (3d Cir. 2001)*; United States v. Chanthadara*, 230 F.3d 1237, 1256-57 (10th Cir. 2000)*; Rioux*, 97 F.3d at 655; *United States v. Rogers*, 73 F.3d 774-776-77 (8th Cir. 1996); *Alston v. Manson*, 791 F.2d 255, 257-258 (2d Cir. 1986) (analyzing substantial underrepresentation in an equal protection challenge).

The Defendants urge us to employ a statistical binomial distribution method of assessing the probability of different levels of jury participation by race or ethnicity, as a more

appropriate method where minorities represent a tiny percentage

of the population. The Government does not endorse a specific

approach, but argues that the statistical evidence presented

fails to satisfy the Defendants' burden of proof under any

approach. To demonstrate this point, the Government's expert

calculated absolute disparity, absolute impact, comparative

disparity and a level of statistical significance, or "p-value,"

for several samples: 1) the completed 2006-7 Burlington and

Rutland grand jury questionnaires; 2) the completed 2001-2007

Burlington and Rutland grand jury questionnaires; 3) the

completed questionnaires reported on the 2006 JS-12; 4) the

completed questionnaires reported on the 2002 and 2006 JS-12's;

and 5) all jury data for one-step summoning. (Gov't Ex. 103.)

B.   Application of the Absolute Disparity and Absolute Impact
**   Approaches**

The absolute disparity approach measures the difference

between a group's proportion in the population (in this case the

voting age population of the District in 2000) and its proportion

in the relevant sample. *See Rioux*, 97 F.3d at 655. The absolute

impact approach takes this analysis one step further and measures

the degree of underrepresentation by calculating how many

individuals from the group would have to be added to a venire to

achieve proportionality. *Id.* (terming this approach the

"absolute numbers" approach).

Measuring absolute disparity, the differences were small for

all samples, ranging from a negative 0.09% for the 2006-2007

Burlington and Rutland grand juries to 0.43% for the 2006 JS-12

summaries for African Americans, and ranging from a negative

0.16% to 0.96% for the 2006 JS-12 summaries for Hispanics (Gov't

Ex. 103A.) Absolute impact numbers were also small, ranging from

a negative 0.5 for the 2006-2007 Burlington and Rutland grand

juries to 5.1 for all jury data for African Americans, and a

negative 0.7 for the 2006 JS-12 summaries to 2.2 for the 2006-

2007 Burlington and Rutland grand juries. These results are

hardly surprising, given the small percentages at issue.

Obviously, judged by absolute disparity or absolute impact, the

numbers are "constitutionally insignificant." *Rioux*, 97 F.3d at

658; *accord Biaggi*, 909 F.2d at 678; *United States v. Jenkins*,

496 F.2d 57, 66 (2d Cir. 1974).

The experts on both sides agree, however, that absolute

disparity and absolute impact are poor measures for Vermont data,

because they are incapable of detecting systematic exclusion of

very small minority populations. Because an absolute percentage

disparity can never exceed the percentage of the distinct group

in the community, *see Rogers*, 73 F.3d at 776-77, exclusion of all

African Americans or Hispanics from jury pools in Vermont could

never approach even the numbers found constitutionally

insignificant in *Rioux* or *Biaggi*.

In *Rioux*, the Second Circuit approved an absolute

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disparity/absolute numbers approach for the facts of that case,
but noted its ongoing concern for use of this approach in cases
where the minority population is a tiny percentage of the entire
population. *Rioux*, 97 F.3d at 656. The panel characterized the
minority population percentages at issue in *Rioux* as "relatively
small," at 8.33% for African Americans and 5.18% for Hispanics.

In this case, where the minority population percentages are
many times smaller than "relatively small," the experts disavow
the use of these approaches as incapable of providing meaningful
results in our District, and the case law does not prohibit the
use of other approaches, we proceed to consider alternative
approaches to determining substantial underrepresentation.

C.   Application of the Comparative Disparity Approach

Comparative disparity is absolute disparity expressed as a
percentage of the population percentage. *See id.* at 655
("Comparative disparity is calculated by dividing the 'absolute
disparity' of a group . . . by the group's percentage of the
population, and then multiplying by 100%.") This measure is
better able to detect systematic underrepresentation of minority
groups that exist in extremely small numbers relative to the
population as a whole. However, comparative disparity figures
can fluctuate widely, because they do not control for the
variability due to chance.

The Government's expert, Dr. Cobb, favored comparative

disparity, for its ease in computation and its sensitivity to small absolute disparities when the minority constitutes a very small percentage of the population. Comparative disparities for all samples except for the most recent data from the 2006-2007 Burlington and Rutland grand juries were high, including a disparity of 100% for African Americans in the 2006 JS-12 summary, reflecting the fact that no African Americans were reported in the 2006 JS-12. According to Dr. Cobb, "[m]any of the differences between population and sample percentages of African Americans register as substantial when measured using comparative disparity." (Gov't Ex. 103 at 19.) The comparative disparities for Hispanics or Latinos tended to be smaller, but varied from a negative 20% for the 2006 JS-12 summary to 68% for the 2006-2007 Burlington and Rutland grand juries.

The wide variation in the values computed illustrate how this measure's outcome is heavily dependent upon the choice of sample and sample size. For example, carving out the most recent jury data from the Burlington and Rutland grand jury questionnaires produces no underrepresentation of African Americans. Using the same data (three African Americans) in the context of the full seven years of returned questionnaires produces a comparative disparity of 61%.

Recognizing this limitation in the comparative disparity approach, Dr. Cobb calculated p-values, to test whether the

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results were "statistically significant," that is, could have

resulted from chance alone. *See, e.g., Castaneda v. Partida*, 430

U.S. 482, 495-96 n.13, 17 (1977); *Alston*, 791 F.2d at 258. His

calculations show that the p-values fall outside the traditional

standard of plus or minus 2.5% for statistical significance.[5]

Some of the values, in the five to seven percent range, were

close enough that, in Dr. Cobb's words, "this is the kind of

situation where in the social sciences one might well decide we

need to do more research and get more data and continue to

monitor the situation to see how things develop with larger

samples." (Cobb Tr. 40-41.) Based on Dr. Cobb's calculations,

the Court cannot rule out that the underrepresentation of African

Americans and Hispanics shown by a comparative disparity analysis

has occurred by chance.

D.   Application of Statistical Probabilities

        The Defendants' expert, Dr. Jeffrey Fagan, used statistical

methods to compute the probability of differing numbers of

African Americans and Hispanics or Latinos appearing in jury

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[5] Dr. Cobb notes that in science generally a data comparison is
said to be statistically significant if the *p*-value is 5% or
less, or plus or minus two standard deviations. Courts have used
standard deviation analysis in a variety of contexts, including
jury-selection cases, but there is no consensus about the number
of standard deviations that will be deemed significant. *See*
Watson v. Fort Worth Bank & Trust, 487 U.S. 977, 995 n.3 (1988).

pools of 200 and 250 individuals.[6] He calculated the cumulative

probability of the racial and ethnic composition of these pools,

based on the racial and ethnic composition data reported in the

2006 JS-12 and the Census 2000 voting age population percentages.

He used a cumulative binomial distribution function to estimate

the probability of x persons of either group being selected for

either pool from the master wheel.

    For a 250-person jury pool, proportional representation of

African Americans, given the population rate in the voting age

population in 2000, would be 1.08 persons (.0043 x 250). For a

200-person jury pool, proportional representation of African

Americans would be 0.86 persons (.0043 x 200). The probability

of drawing one African American person in a random sample of 250

persons from the voting age population of the District is 65.9%,

and the probability for a random sample of 200 persons is 57.8%.

(Defs.' Ex. L, Fig. 4.)

    According to the 2006 JS-12 sample, out of 607 returned

questionnaires with completed racial and ethnic information,

there were zero African Americans. Thus the probability of

drawing one African American from the master wheel, assuming the

sample accurately reflects the wheel, is 0.0%. The disparities

are therefore 65.9% for a pool of 250, and 57.8% for a pool of

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[6] The jury administrator draws 250 names for a grand jury pool
and 200 names for a petit jury pool.

200.

For a 250-person jury pool, proportional representation of Hispanics, given the population rate in the voting age population in 2000, would be two persons (.0080 x 250). For a 200-person jury pool, proportional representation of Hispanics would be 1.6 persons (.0080 x 200). The probability of drawing two Hispanic persons in a random sample of 250 persons from the voting age population of the District is 59.5%, and the probability for a random sample of 200 persons is 47.6%. (Defs.' Ex. L, Fig. 4.)

Four individuals reported Hispanic or Latino ethnicity according to the 2006 JS-12 sample. Thus the probability of drawing two Hispanics from the master wheel is 69.3% for a 250-person pool and 57.3% for a 200-person pool. The comparative disparities are negative (-9.8% and -9.7% respectively), and therefore by this calculation Hispanics or Latinos are not underrepresented in the jury pool.

Noting that persons who identify themselves as Hispanic or Latino are likely to represent more than one racial group, Dr. Fagan recalculated the probability of proportionate representation by reclassifying the number of Hispanics from the 2006 JS-12 sample, assuming two white Hispanics and two black Hispanics. With this adjustment, the comparative disparity in African American representation dropped to 9.7% for a 250-person pool (65.9% - 56.2%) and 9.4% (57.8% - 48.4%) for a 200-person

pool. (Defs.' Ex. L, Fig. 5.) The comparative disparity in
Hispanic representation rose to 25.7% for a 250-person pool
(59.5% - 33.8%) and 22.7% (47.6% - 24.9%) for a 200-person pool.
(*Id.*)

Dr. Fagan concluded that both African Americans and
Hispanics are likely to be underrepresented in jury pools in the
District of Vermont. He cited the use of voter registration
lists to generate the pool of potential jurors as a culprit. He
did not attempt to calculate the statistical significance of the
disparities, nor did he offer an opinion on whether the data
showed systematic exclusion.

Dr. Fagan's methodology illustrates "the problem of drawing
a line between significant and insignificant disparities."
Michael O. Finkelstein, *The Application of Statistical Decision
Theory to the Jury Discrimination Cases*, 80 Harv. L. Rev. 338,
348 (1966). Probability calculations like Dr. Fagan's do detect
underrepresentation where the group constitutes a very small
percentage of the population, but fail to supply a test or
measure of the significance of the difference. *See id.* at 352
(describing statistical decision theory as not only measuring the
extent to which a distribution varies from the expected random
distribution, but testing the significance of the difference).

E.   Unreasonable Underrepresentation

"'[S]tatistics . . . come in infinite variety . . . .

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[T]heir usefulness depends on all of the surrounding facts and circumstances.'" *Hazelwood Sch. Dist. v. United States*, 433 U.S. 299, 312 (1977) (quoting *Int'l Bhd. of Teamsters v. United States*, 431 U.S. 324, 340 (1977)). The experts agree that the African American population in Vermont has grown rapidly since the year 2000, and consequently the voting age population has increased. The comparative disparity results from Dr. Cobb's and Dr. Fagan's calculation could be higher than the results presented. Nevertheless, both witnesses chose to use the more conservative figures, and we accept their choice, with the proviso that it may indeed understate any underrepresentation, by an unknown amount, with unknown significance.

Nevertheless, taking into consideration all of the evidence presented at the hearing, Defendants have not sustained their burden of showing unreasonable underrepresentation of African Americans and Hispanics in Vermont jury pools. The data are subject to such a variety of assumptions and uncertainties that it is not possible to say to what extent the conclusions that may be drawn are reliable. In particular, the sample sizes are for the most part small. *See Moultrie v. Martin*, 690 F.2d 1078, 1083 (4th Cir. 1982) ("[I]t is axiomatic in statistical analysis that the precision and dependability of statistics is directly related to the size of the sample being evaluated.") The choice of sample is subjective and can affect the outcome of the analysis.

Of the returned jury questionnaires a substantial number of
responders elected not to answer the race and ethnicity
questions. This may have introduced bias in the sample if non-
responders tend to be disproportionately of one race or
ethnicity. Most importantly, the Defendants have not been able
to demonstrate that any discrepancy in the expected number of
minorities on grand juries and the observed number is not likely
due to chance.

F.   Systematic Exclusion

"There is systematic exclusion when the underrepresentation
is due to the system of jury selection itself, rather than
external forces." *Rioux*, 97 F.3d at 658. If statistical
evidence of underrepresentation alone may prove systematic
exclusion, it "would have to be of an overwhelmingly convincing
nature." *Id.; accord Miller*, 116 F.3d at 657. Absent
overwhelmingly convincing statistics in this case the Defendants
would need to show a significant discrepancy occurring over time.
See Duren, 439 U.S at 366 (a "large" discrepancy in every weekly
venire for a period of a year indicated that the
underrepresentation was systematic).

The statistical evidence of underrepresentation is
suggestive, and worthy of concern, but given the absence of
statistical significance and the variability of the data, the
statistical evidence is not "overwhelmingly convincing." Nor,

given the small sample sizes, and the small numbers of African

Americans or Hispanics that would need to be added to the pools

to achieve proportionality (for example, adding one African

American individual to all-white jury pools of 200 and 250 would

achieve proportionality, according to Dr. Fagan's calculations)

do the data alone support a finding that there has been

significant underrepresentation over time.

Even assuming for the sake of argument that the Defendants

have shown unreasonable underrepresentation, they have not proven

systematic exclusion. The Defendants contend that if the results

of the jury selection system are a "significant and consistent

underrepresentation of African Americans and the court chooses to

continue using such a system, then surely the continuing

exclusion is systemic [sic]." (Defs.' Consol. Submission 20.)

Defendants' argument begs the question of whether the

underrepresentation is significant and consistent. Examination

of the available statistics over time are inconclusive.

For example, data collected for the JS-12 reports for 1993,

1997, 2002 and 2006 show a total of nine African Americans and

sixteen Hispanics out of a total sample of 4,139 completed and

returned questionnaires. (Gov't Ex. 103, Table 3.) Proportional

representation overall (based on the Census 2000 percentages)

would be eighteen individuals. But of the twelve samples

collected, averaging 345 individuals each, four samples contained

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zero African Americans and eight samples included one or two African Americans, levels equal to or greater than proportional representation. (*Id.*) Using absolute disparity or impact, these differences are not constitutionally significant. And without a measure of statistical significance it is impossible to tell whether the samples display random variation or an overall trend of consistent underrepresentation.

Equally problematic is the second half of Defendants' statement, charging that continued use of "such a system," equates to systematic exclusion. The Defendants state that "in the District of Vermont, with its unique demographics, choosing jurors exclusively from the voter registration lists consistently produced underrepresentation." (Defs.' Consol. Submission 21.) This of course is not true; the most that can be said of the samples is that most of the samples examined showed underrepresentation.

The Defendants urge us to accept that the principal reason for the underrepresentation is that African Americans in Vermont are less likely to register to vote than whites are.[7] Although the experts agree that data for the United States as a whole show that African Americans are less likely than whites to register to vote, and therefore exclusive reliance on voter lists for

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[7]   The Defendants make no argument concerning Hispanics or Latinos in this respect.

potential jurors could introduce racial bias, we have very little

District-specific data. Instead we have been provided with a

wealth of what we might call educated speculation as to the

likelihood that African American Vermonters would conform to this

trend.

The CPS 2004 estimates that there are two thousand African

Americans in the voting age population in Vermont. Of those, an

estimated one thousand are citizens, and therefore eligible to

serve on jury panels, as well as register to vote. The estimates

are too small to calculate a margin of error, and the number of

registered voters, estimated at less than one thousand, rounds to

zero. Accordingly, no percentage of African American registered

voters or margin of error is calculated, to compare to the

percentage of white voters. (Defs.' L, Fig. 2.) The Court does

not accept Defendants' contention that the CPS 2004 figures show

that less than 25% of African Americans have registered to vote

in Vermont, compared with 74.4% of the white population.

Defendants' expert Orlando Rodriguez, a demographer, opined

that the rate of African American voter registration in Vermont

would lag behind the overall rate, based upon factors which tend

nationally to influence voter registration: age, education and

length of residency. Nationally, rates of registration increase

as age increases. In Vermont the median white age is 41 and the

median African American age is 24. This may mean that African

Americans in Vermont, if they follow the national trend, register to vote in lower percentages. The low median age may also mean that substantial numbers of African American Vermont residents are younger than eighteen, and therefore ineligible to serve on juries.

Nationally, levels of educational attainment correspond with voter registration; individuals who have studied beyond high school are more likely to register to vote than those with a high school education or less. Although nationwide African American post-high school educational attainment has lagged behind whites, in Vermont the figures are nearly equal, and equal to the figures for white post-high school education nationally. (Defs.' Ex. I at 5.) Median income for African Americans in Vermont is also roughly equivalent to white median incomes, corresponding to higher levels of education. (*Id.*) The national figures show that at all levels of education fewer African Americans register to vote, however, and Defendants ask us to conclude that the Vermont voter registration rate would follow the same pattern despite evidence that African American residents of Vermont do not match the national picture.

Nationally, the rate of voter registration increases with length of residency. Those who have lived in a state for one to four years are roughly ten percent more likely to be registered to vote than those who have lived in the state for less than a

year, and the rate of voter registration increases similarly with five or more years of residence. Vermont shows a very high proportion of African Americans with less than one year of residency, nearly double the white rate. Given that a year of residency is a prerequisite for jury service, a disproportionate number of African American Vermont residents are ineligible to serve, and consequently the contention that African Americans are less likely to register to vote because they have lived here less than a year has no bearing on achieving greater representation in the jury pools. That Vermont's African American population tends to be more mobile may reduce their eligibility to serve on juries as it increases the likelihood that they may not register to vote.[8]

The foregoing illustrates that we have very little Vermont-specific data to support the assertion that African Americans are less likely to register to vote here, and reason to suspect that Vermont does not follow the national trend. Mr. Rodriguez's data at best suggests, it does not supply, evidence that jury-eligible African Americans are underrepresented on voter registration checklists.

Mr. Rodriguez also criticized Vermont's method of systematic random selection of names to fill the master wheel. The jury

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[8] However, Vermont's four-year gap between refilling the master wheel may fail to capture eligible recent arrivals to the State.

administrator prepares a list of towns in alphabetical order with the registered voters listed alphabetically by surname. Every *n*th name is selected from the list, provided that two names must be selected from each town. If Vermont's African American population is clustered in a few towns, and bear a relatively small number of surnames, there may be clusters of African American voters with the same surname who are skipped entirely, or one chosen and the rest effectively excluded. The Defendants urge us to select prospective jurors from a completely randomly generated list.

Although Dr. Cobb demonstrated that over the long run random selection and systematic random selection will produce the same results, he failed to state how long a run would be required. Given that the master wheel is only refilled once every four years it could take quite a while to achieve a truly random selection over time. Nevertheless, Mr. Rodriguez's legitimate criticism of the theory behind Vermont's systematic random selection system for the filling of the master wheel does not add up to proof of systematic exclusion. While the experts do not dispute that the use of alphabetized surname lists has the potential to create racial or ethnic bias in the selection process, Mr. Rodriguez's description of the system's flaws are based on generalizations about predominately white, African American or Hispanic surnames in the country as a whole. His

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analysis does not offer evidence of systematic exclusion in the District of Vermont's jury selection process.

Conclusion

That there is disparity between the expected and observed incidence of African Americans and Hispanics or Latinos in samples of the jury pools is undeniable. The Defendants have not shown that this disparity amounts to unreasonable underrepresentation or that it is the result of systematic exclusion. They have not therefore established a violation of the JSSA or the Sixth Amendment.[9]

That Vermont's jury selection system meets statutory and constitutional minima does not terminate the discussion, however. Given that Vermont appears to be the only district in the Second Circuit, *see Reyes*, 934 F. Supp. at 566-67 & n.36, that does not supplement voter registration lists with motor vehicle records, we conclude that the next Plan should be amended to draw

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[9] Certain Defendants have also raised a Fifth Amendment challenge to the District's jury selection process as a violation of the equal protection clause. A successful Fifth Amendment equal protection challenge must offer proof of "a selection procedure that is not racially neutral, i.e., is the result of intentional discrimination by the District." *Rioux*, 97 F.3d at 659; *accord Alston*, 791 F.2d at 257. Substantial underrepresentation of a distinct group can establish a prima facie case of discriminatory purpose. *Alston*, 791 F.2d at 257 (citing *Castaneda*, 430 U.S. at 494-495). The Defendants have not offered any evidence of intentional discrimination. Nor, as discussed in the text above, have they shown substantial underrepresentation. Accordingly, their Fifth Amendment challenge fails.

potential jurors from motor vehicle records in addition to voter registration lists. The statute authorizes us to do so, and it is entirely consistent with our policy to expand the pool of potential qualified jurors and to prohibit any barriers from service as a grand or petit juror on account of race or ethnicity.

Dated at Burlington, in the District of Vermont, this 5th day of August, 2008.

/s/ William K. Sessions III

William K. Sessions III, Chief Judge
United States District Court

Dated at Brattleboro, in the District of Vermont, this 5th day of August, 2008.

/s/ J. Garvan Murtha

J. Garvan Murtha, Judge
United States District Court